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United States District Court
Southern District of New York

1:19-cv-10686-KPF

Ryan Cosgrove, individually and on behalf
of all others similarly situated,

Plaintiff,

- against -

Oregon Chai, Inc.,

Defendant

Class Action Complaint

Plaintiff by attorneys alleges upon information and belief, except for allegations pertaining to plaintiff, which are based on personal knowledge:

1. Oregon Chai, Inc. (“defendant”) manufactures, distributes, markets, labels and sells powdered chai tea mix packets purporting to be flavored by vanilla under their Oregon Chai brand (“Products”).
2. The Products are available to consumers from retail and online stores of third-parties and defendant's website and Amazon.com and are sold in cans of 8.4 OZ.
3. The front label includes the main flavor designation, “Vanilla,” “Vanilla and honey combine with premium black tea and chai spices” and “Made with Natural Ingredients.”



4. Chai refers to a “type of drink, made originally in India, consisting of tea made with spices and usually with milk and sugar added.”¹

5. Chai is often flavored vanilla because the flavor from this tropical orchid helps to smooth out the spiciness and enhance the sweetness.

6. The Products are misleading because (1) although labeled as “Vanilla,” they have less (or no) real vanilla than the label suggests and (2) “Made with Natural Ingredients” gives reasonable consumers the impression that all of the ingredients in the Product are natural, when

¹ Cambridge Dictionary, [Chai](#), Definition.

this is not truthful.

I. Vanilla is Constantly Subject to Efforts at Imitation Due to High Demand

7. The tropical orchid of the genus *Vanilla* (*V. planifolia*) is the source of the prized flavor commonly known as vanilla, defined by law as “the total sapid and odorous principles extractable from one-unit weight of vanilla beans.”²

8. Vanilla’s “desirable flavor attributes...make it one of the most common ingredients used in the global marketplace, whether as a primary flavor, as a component of another flavor, or for its desirable aroma qualities.”³

9. Though the Pure Food and Drugs Act of 1906 (“Pure Food Act”) was enacted to “protect consumer health and prevent commercial fraud,” this was but one episode in the perpetual struggle against those who have sought profit through sale of imitation and lower quality commodities, dressed up as the genuine articles.⁴

10. It was evident that protecting consumers from fraudulent vanilla would be challenging, as E. M. Chace, Assistant Chief of the Foods Division of the U.S. Department of Agriculture’s Bureau of Chemistry, noted “There is at least three times as much vanilla consumed [in the United States] as all other flavors together.”⁵

11. This demand could not be met by natural sources of vanilla, leading manufacturers to devise clever, deceptive and dangerous methods to imitate vanilla’s flavor and appearance.

12. Today, headlines tell a story of a resurgent global threat of “food fraud” – from olive

² 21 C.F.R. §169.3(c).

³ Daphna Havkin-Frenkel, F.C. Bellanger, Eds., *Handbook of Vanilla Science and Technology*, Wiley, 2018.

⁴ Berenstein, 412; some of the earliest recorded examples of food fraud include unscrupulous Roman merchants who sweetened wine with lead.

⁵ E. M. Chace, “The Manufacture of Flavoring Extracts,” *Yearbook of the United States Department of Agriculture* 1908 (Washington, DC: Government Printing Office, 1909) pp.333–42, 333 quoted in [Nadia Berenstein](#), “[Making a global sensation: Vanilla flavor, synthetic chemistry, and the meanings of purity](#),” *History of Science* 54.4 (2016): 399-424 at 399.

oil made from cottonseeds to the horsemeat scandal in the European Union.⁶

13. Though “food fraud” has no agreed-upon definition, its typologies encompass an ever-expanding, often overlapping range of techniques with one common goal: giving consumers less than what they bargained for.

A. Food Fraud as Applied to Vanilla

14. Vanilla is considered a “high-risk [for food fraud] product because of the multiple market impact factors such as natural disasters in the source regions, unstable production, wide variability of quality and value of vanilla flavorings,” second only to saffron in price.⁷

15. The efforts at imitating vanilla offers a lens to the types of food fraud regularly employed across the spectrum of valuable commodities in today’s interconnected world.⁸

<u>Type of Food Fraud</u>	<u>Application to Vanilla</u>
➤ Addition of markers specifically tested for instead of natural component of vanilla beans	<ul style="list-style-type: none"> • Manipulation of the carbon isotope ratios to produce synthetic vanillin with similar carbon isotope composition to natural vanilla • Ground vanilla beans and/or seeds to provide visual appeal as “specks” so consumer thinks the product contains real vanilla beans, when the ground beans have been exhausted of flavor • Caramel to darken the color of an imitation vanilla so it
➤ Appearance of <i>more</i> and/or higher quality of the valued ingredient	

⁶ Jenny Eagle, [‘Today’s complex, fragmented, global food supply chains have led to an increase in food fraud’](#), FoodNavigator.com, Feb. 20, 2019; M. Dourado et al., [Do we really know what’s in our plate?](#), Annals of Medicine, 51(sup1), 179-179 (May 2019); Aline Wisniewski et al., [How to tackle food fraud in official food control authorities in Germany](#), Journal of Consumer Protection and Food Safety: 1-10, June 11, 2019.

⁷ Société Générale de Surveillance SA, (“SGS”), [Authenticity Testing of Vanilla Flavors – Alignment Between Source Material, Claims and Regulation](#), May 2019.

⁸ Kathleen Wybourn, DNV GL, [Understanding Food Fraud and Mitigation Strategies](#), PowerPoint Presentation, Mar. 16, 2016.

- more closely resembles the hue of real vanilla⁹
- Annatto and turmeric extracts in dairy products purporting to be flavored with vanilla, which causes the color to better resemble the hue of rich, yellow butter
 - Tonka beans, though similar in appearance to vanilla beans, are banned from entry to the United States due to fraudulent use
 - Coumarin, a toxic phytochemical found in Tonka beans, added to imitation vanillas to increase vanilla flavor perception
 - Synthetically produced ethyl vanillin, from recycled paper, tree bark or coal tar, to imitate taste of real vanilla
 - “to mix flavor materials together at a special ratio in which they [sic] compliment each other to give the desirable aroma and taste”¹⁰
 - Combination with flavoring substances such as propenyl guaethol (“Vanitrope”), a “flavoring agent [, also] unconnected to vanilla beans or vanillin, but unmistakably producing the sensation of vanilla”¹¹
- Substitution and replacement of a high quality ingredient with alternate ingredient of lower quality
- Addition of less expensive substitute ingredient to mimic flavor of more valuable component
- Compounding, Diluting, Extending

⁹ Renée Johnson, “[Food fraud and economically motivated adulteration of food and food ingredients](#),” Congressional Research Service R43358, January 10, 2014.

¹⁰ Chee-Teck Tan, “[Physical Chemistry in Flavor Products Preparation: An Overview](#)” in Flavor Technology, ACS Symposium Series, Vol. 610 1995. 1-17.

¹¹ Berenstein, 423.

- Addition of fillers to give the impression there is more of the product than there actually is
 - “Spiking” or “fortification” of vanilla through addition of natural and artificial flavors including vanillin, which simulates vanilla taste but obtained from tree bark
 - Injection of vanilla beans with mercury, a poisonous substance, to raise the weight of vanilla beans, alleged in *International Flavors and Fragrances (IFF), Inc. v. Day Pitney LLP and Robert G. Rose*, 2005, Docket Number L-4486-09, Superior Court of New Jersey, Middlesex County
 - Subtle, yet deliberate misidentification and obfuscation of a product’s components and qualities as they appear on the ingredient list
 - “ground vanilla beans” gives impression it describes unexhausted vanilla beans when actually it is devoid of flavor and used for aesthetics
 - “natural vanilla flavorings” – “-ing” as suffix referring to something *like* that which is described
 - “Vanilla With Other Natural Flavors” – implying – wrongly – such a product has a sufficient amount of vanilla to characterize the food
 - “Natural Flavors” – containing “natural vanillin” derived not from vanilla beans but from tree pulp. When paired with real vanilla, vanillin is required to be declared as an artificial flavor
 - “Non-Characterizing” flavors which are not identical to vanilla, but that extend vanilla
- Ingredient List Deception¹²

16. The “plasticity of legal reasoning” with respect to food fraud epitomize what H.

¹² Recent example of this would be “evaporated cane juice” as a more healthful sounding term to consumers to identify sugar.

Mansfield Robinson and Cecil H. Cribb noted in 1895 in the context of Victorian England:

the most striking feature of the latter-day sophisticator of foods is his knowledge of the law and his skill in evading it. If a legal limit on strength or quality be fixed for any substance (as in the case of spirits), he carefully brings his goods right down to it, and perhaps just so little below that no magistrate would convict him.

The law and chemistry of food and drugs. London: F.J. Rebman at p. 320.¹³

B. The Use of Vanillin to Simulate Vanilla

17. The most persistent challenger to the authenticity of real vanilla has been synthetic versions of its main flavor component, vanillin.

18. First synthesized from non-vanilla sources by German chemists in the mid-1800s, vanillin was the equivalent of steroids for vanilla flavor.

19. According to Skip Roskam, a professor of vanilla at Penn State University and former head of the David Michael flavor house in Philadelphia, “one ounce of vanillin is equal to a full gallon of single-fold vanilla extract.”¹⁴

20. Today, only 1-2% of vanillin in commercial use is vanillin obtained from the vanilla plant, which means that almost all vanillin has no connection to the vanilla bean.

21. Nevertheless, disclosure of this powerful ingredient has always been required where a product purports to be flavored with vanilla. See [Kansas State Board of Health, Bulletin, Vol. 7, 1911](#), p. 168 (cautioning consumers that flavor combinations such as “vanilla and vanillin...vanilla flavor compound,” etc., are not “vanilla [extract] no matter what claims, explanations or formulas are given on the label.”).

22. Since vanilla is the only flavor with its own standard of identity, its labeling is

¹³ Cited in Sébastien Rioux, “[Capitalist food production and the rise of legal adulteration: Regulating food standards in 19th-century Britain](#),” *Journal of Agrarian Change* 19.1 (2019) at p. 65 (64-81).

¹⁴ Katy Severson, [Imitation vs. Real Vanilla: Scientists Explain How Baking Affects Flavor](#), *Huffington Post*, May 21, 2019.

controlled not by the general flavor regulations but by the standards for vanilla ingredients.

23. This means that if a product is represented as being characterized by vanilla yet contains non-vanilla vanillin, the label and packaging must declare vanillin an artificial flavor. *See* Vanilla-vanillin extract at 21 C.F.R. § 169.180(b) (“The specified name of the food is ‘Vanilla-vanillin extract _-fold’ or ‘_-fold vanilla-vanillin extract’, followed immediately by the statement ‘contains vanillin, an artificial flavor (or flavoring)’.”); *see also* 21 C.F.R. § 169.181(b), § 169.182(b) (Vanilla-vanillin flavoring and Vanilla-vanillin powder).

24. This prevents consumers from being misled by products which may taste similar to real vanilla and but for consumer protection requirements, would be sold at the price of real vanilla.

C. Production of “Natural Vanillins” Combined with “Natural Vanilla”

25. The past ten years have seen many vanillins purporting to be a “natural flavor” – derived from a natural source material which undergoes a natural production process.

26. However, “natural vanillin” is not a “natural vanilla flavor” because the raw material is not vanilla beans but ferulic acid and eugenol.

27. Ferulic acid can be converted to vanillin through a natural fermentation process which is cost prohibitive for almost all applications.

28. Vanillin from eugenol is easier to produce in a way claimed to be a “natural process.”

29. However, because this process occurs without transparency or verification in China, regulators and consumers are not told the production method is more properly described as that of an artificial flavor, involving a chain of chemical reactions.

II. Flavor Industry’s Efforts to Use Less Vanilla, Regardless of any Shortages

30. The “flavor industry” refers to the largest “flavor houses” such as Symrise AG, Firmenich, Givaudan, International Flavors and Fragrances (including David Michael), Frutarom

and Takasago International along with the largest food manufacturing companies such as Unilever.

31. The recent global shortage of vanilla beans has provided the flavor industry another opportunity to “innovate[ing] natural vanilla solutions...to protect our existing customers.”¹⁵

32. Their “customers” do not include the impoverished vanilla farmers nor consumers, who are sold products labeled as “vanilla” for the same or higher prices than when those products contained *only* vanilla.

33. These efforts include (1) market disruption and manipulation and (2) the development of alternatives to vanilla which completely or partially replace vanilla.

A. Flavor Industry’s Attempt to Disrupt Supply of Vanilla to Create a “Permanent Shortage”

34. The flavor industry has developed schemes such as the “Sustainable Vanilla Initiative” and “Rainforest Alliance Certified,” to supposedly assure a significant supply of vanilla at stable, reasonable prices.

35. Contrary to their intention, these programs make vanilla less “sustainable” by paying farmers to destroy their vanilla and harvest palm oil under the pretense of “crop diversification.”

36. There have also been allegations that these programs use child and/or slave labor.

37. Other tactics alleged to be utilized by these companies include “phantom bidding,” where saboteurs claim they will pay a higher price to small producers, only to leave the farmers in the lurch, forced to sell at bottom dollar to remaining bidders.¹⁶

38. The reasons for these counterintuitive actions is because they benefit from high vanilla prices and the use of less real vanilla.

39. When less vanilla is available, companies must purchase the higher margin,

¹⁵ Amanda Del Buono, [Ingredient Spotlight](#), Beverage Industry, Oct. 3, 2016.

¹⁶ Monte Reel, [The Volatile Economics of Natural Vanilla in Madagascar](#), Bloomberg.com, Dec. 16, 2019.

proprietary, “vanilla-like” flavorings made with advanced technology and synthetic biology.

B. Use of Vanilla WONF Ingredients to Replace and Provide Less Vanilla

40. Though flavor companies will not admit their desire to move off real vanilla, this conclusion is consistent with the comments of industry executives.

41. According to Suzanne Johnson, vice president or research at a North Carolina laboratory, “Many companies are trying to switch to natural vanilla with other natural flavors [WONF] in order to keep a high-quality taste at a lower price,” known as “Vanilla WONF.”

42. The head of “taste solutions” at Irish conglomerate Kerry urged flavor manufacturers to “[G]et creative” and “build a compounded vanilla flavor with other natural flavors.”

43. A compounded vanilla flavor “that matches the taste of pure vanilla natural extracts” can supposedly “provide the same vanilla taste expectation while requiring a smaller quantity of vanilla beans. The result is a greater consistency in pricing, availability and quality.”¹⁷

44. These compounded flavors exist in a “black box” with “as many as 100 or more flavor ingredients,” including potentiators and enhancers, like maltol and piperonal, blended together to enhance the vanilla, allowing the use of less vanilla to achieve the intended taste.¹⁸

45. The effort to replace vanilla with so-called Vanilla WONF started in the late 1960s, but the last 10 years have seen the proliferation of this ingredient.

C. Decline of Industry Self-Governance

46. That high level executives in the flavor industry are willing to boast of their

¹⁷ Donna Berry, [Understanding the limitations of natural flavors](#), BakingBusiness.com, Jan. 16, 2018.

¹⁸ Hallagan and Drake, FEMA GRAS and U.S. Regulatory Authority: U.S. Flavor and Food Labeling Implications, *Perfumer & Flavorist*, Oct. 25, 2018; Charles Zapsalis et al., *Food chemistry and nutritional biochemistry*. Wiley, 1985, p. 611 (describing the flavor industry’s goal to develop vanilla compound flavors “That *Seem[s]* to be Authentic or at Least Derived from a Natural Source”) (emphasis added).

stratagems to give consumers less vanilla for the same or greater price is not unexpected.

47. The once powerful and respected trade group, The Flavor and Extract Manufacturers Association (“FEMA”), abandoned its “self-policing” of misleading vanilla labeling claims and disbanding its Vanilla Committee.

48. FEMA previously opposed industry efforts to deceive consumers, but cast the public to the curb in pursuit of membership dues from its largest members, such as Unilever.

III. Designating Flavors and Ingredients in Products Represented as “Vanilla”

A. Front Label Designation of Flavors

49. Where a food makes any representations as to its primary flavor, it must be designated in a way which is truthful and not misleading based on various factors.

50. These include (1) the presence of “natural flavor” and/or “artificial flavor,” (2) whether the natural and artificial flavor simulates, resembles or reinforces the characterizing flavor, (3) whether the natural flavor is obtained from the food ingredient represented as the characterizing flavor – i.e., does the peach flavor come from real peaches or is it synthesized from apricots? and (4) the relative amounts of the different flavor types. *See* 21 C.F.R. § 101.22(i)(1)(i)-(iii), 21 C.F.R. § 101.22(i)(2).

51. “Natural flavor” refers to “the essential oil, oleoresin, essence or extractive...which contains the flavoring constituents” from a natural source such as plant material and can refer to combinations of natural flavors. *See* 21 C.F.R. § 101.22(a)(3).

52. “Artificial flavor” is any substance whose function is to impart flavor that is not derived from a natural source. *See* 21 C.F.R. § 101.22(a)(1).

53. A product labeled “Vanilla _____” gives the impression that all the flavor (taste sensation and ingredient imparting same) in the product is contributed by the characterizing food

ingredient of vanilla beans. *See* 21 C.F.R. § 101.22(i)(1) (describing a food which contains no simulating artificial flavor and not subject to 21 C.F.R. § 101.22(i)(1)(i)-(iii)).

54. The absence of the term “flavored” where a food is labeled “Vanilla” gives consumers the impression the food contains a sufficient vanilla to characterize the food.

55. If a product contains an “amount of characterizing ingredient [vanilla] insufficient to independently characterize the food,” it would be required to be labeled as “Vanilla flavored _____” or “natural vanilla flavored _____.” *See* 21 C.F.R. § 101.22(i)(1)(i).

56. Where a product contains a “characterizing flavor from the product whose flavor is simulated and other natural flavor which simulates, resembles or reinforces the characterizing flavor,” the front label would be required to state “with other natural flavor.” *See* 21 C.F.R. § 101.22(i)(1)(iii) (“the food shall be labeled in accordance with the introductory text and paragraph (i)(1)(i) of this section and the name of the food shall be immediately followed by the words “with other natural flavor””).

57. If the amount of the characterizing flavor is sufficient to independently characterize the food, the front label would state “[Name of Characterizing Flavor] With Other Natural Flavor.” *See* 21 C.F.R. § 101.22(i)(1)(iii); *see also* 21 C.F.R. § 101.22(i)(1) (“introductory text” describing scenario where food contains “no artificial flavor which simulates, resembles or reinforces the characterizing flavor,” and none of the sub-paragraphs of 21 C.F.R. § 101.22(i)(1) apply).

58. If the amount of the characterizing flavor is insufficient to independently characterize the food, the front label would be required to state “[Name of Characterizing Flavor] Flavored With Other Natural Flavor.” *See* 21 C.F.R. § 101.22(i)(1)(iii) referring to “paragraph (i)(1)(i) of this section,” 21 C.F.R. § 101.22(i)(1)(i).

59. Where an exclusively vanilla ingredient is used in a product, it is listed on the

ingredient list by its common or usual name provided by its standard of identity. *See* 21 C.F.R. § 169.175(b)(1) (“The specified name of the food is ‘Vanilla extract’ or ‘Extract of vanilla.’”); *see also* 21 C.F.R. § 169.177(b) (“The specified name of the food is ‘Vanilla flavoring.’”).

60. Where vanilla is part of a flavor added to a food, it is labeled “natural flavor.”

IV. Analysis by Gas-Chromatography-Mass Spectrometry Reveals the Absence or Non-Detection of Real Vanilla

61. The Product makes direct and indirect representations as to its “primary recognizable flavor(s), by word, vignette, e.g., depiction of a fruit, or other means.” *See* 21 C.F.R. § 101.22(i).

62. The Product’s primary recognizable flavors include vanilla, honey, cinnamon and chai spices.

63. Where a product’s front label states “Vanilla,” “chai spices” and displays cinnamon cloves, yet none of these ingredients are separately designated on the ingredient list, it is because vanilla, cinnamon and chai spices are part of the “Natural Flavors” ingredient. *See* 21 C.F.R. § 101.22(h)(1) (“Spice, natural flavor, and artificial flavor may be declared as ‘spice’, ‘natural flavor’, or ‘artificial flavor’, or any combination thereof, as the case may be.”).



INGREDIENTS: SUGAR, DRIED WHOLE MILK, DRIED NONFAT MILK, DRIED HONEY, TAPIOCA MALTODEXTRIN, INSTANT BLACK TEA, MALTODEXTRIN, SALT, NATURAL FLAVORS.

INGREDIENTS: SUGAR, DRIED WHOLE MILK, DRIED NONFAT MILK, DRIED HONEY, TAPIOCA MALTODEXTRIN, INSTANT BLACK TEA, MALTODEXTRIN, SALT, NATURAL FLAVORS.

64. “Honey” is indicated in the Product through the designation of “dried honey” which is the fourth most predominant ingredient by weight. 21 C.F.R. § 101.4(a)(1) (requiring

ingredients “be listed by common or usual name in descending order of predominance by weight on either the principal display panel or the information panel”).

65. The front label of the Product is required to be labeled consistent with the flavor regulations in 21 C.F.R. §101.22.

66. By not including any qualifying terms after “vanilla” such as “flavored” or “other natural flavors,” consumers will expect the Product contains actual vanilla from the vanilla bean, that vanilla is one of the characterizing flavors, the amount of vanilla is sufficient to flavor the Product, no other flavors simulate, resemble, reinforce, enhance or extend the flavoring from vanilla.

67. Gas chromatography-mass spectrometry (“GC-MS”) is “the analysis method of choice for smaller and volatile molecules such as benzenes, alcohols and aromatics.”¹⁹

68. GC-MS is able to “separate complex mixtures [, and] to quantify analytes.”

69. Beginning with the gas chromatograph, the sample is vaporized (the gas phase) and separated into its components by a capillary column “packed with a stationary (solid) phase.”

70. The compounds are “propelled by an inert carrier gas such as argon, helium or nitrogen” where they separate from each other and “elute from the column at different times, which is generally referred to as their retention times.”

71. After the components exit the GC column, “they are ionized by the mass spectrometer using electron or chemical ionization sources.”

72. Ionized molecules get accelerated through the mass analyzer, which is typically a quadrupole or ion trap.

73. Then the “ions are separated based on their different mass-to-charge (m/z) ratios.”

¹⁹ ThermoFisher Scientific, [Gas Chromatography Mass Spectrometry \(GC/MS\) Information](#).

74. The last steps “involve ion detection and analysis, with compound peaks appearing as a function of their m/z ratios, with peak heights “proportional to the quantity of the corresponding compound.”

75. A complex sample will generate “several different peaks, and the final readout will be a mass spectrum” which plots the elution time on the X-axis and the amount or intensity of the compounds on the Y-axis.

76. Computer databases of mass spectra are used, like a DNA database, to match the detected compounds based on their m/z ratio.²⁰

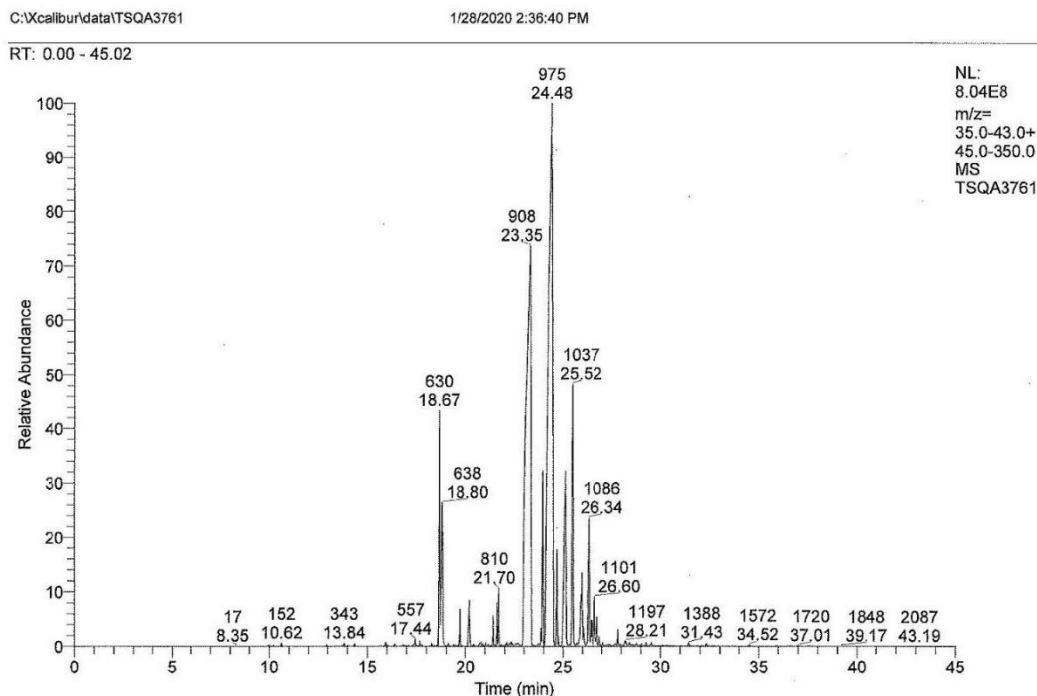
77. GC-MS can detect the presence of the four compounds generally considered markers for the presence of real vanilla, which are present in the following consistent amounts.

<u>Compounds</u>	<u>Percent Present in Vanilla Beans</u>
vanillin	1.3-1.7 %
p-hydroxybenzaldehyde	0.1%
vanillic acid	0.05%
p-hydroxybenzoic acid	0.03%

78. The Product was subjected to GC-MS analysis which generated the below chromatogram and peak assignment table. Exhibit A, GC-MS Report, January 31, 2020.

²⁰ Id.

Vanilla Chai Chromatogram – p. 6



TSQA3761

Type: Unknown ID: 1 Row: 1

Sample Name: Oregon Chai-Vanilla Chai Tea Latte Powder (Production Code: 080940002), DCM Extract, 150C/30min, matrix spiked with w/w 1.0ppm Int. Std. by P&T-TD-GC-MS

Study:

Client: Sheehan & Associates, P.C., LLN7609

Laboratory: Mass Spectrometry - Dr. Tom Hartman

Company:

Phone:

Instrument Method: C:\Xcalibur\methods\voc45solventdelay8min.meth

Processing Method:

Vial: 1

Injection Volume (µl): 10.00

Sample Weight: 0.00

Sample Volume (µl): 0.00

ISTD Amount: 0.00

Dil Factor: 1.00

80. The peak assignment table identified the flavor compounds by matching their m/z ratio with a computer database of virtually all known compounds.

Peak Assignment Table – p. 5

Table 1

Sheehan & Associates, P.C., Project #7609

Oregon Chai-Vanilla Chai Tea Latte Powder

Production Code: 080940002

Methylene Chloride Extract of with 1 ppm Matrix-Spiked Int. Std. by P&T-TD-GC-MS

Data File = TSQA3761

MS Scan #	Area Integration	Peak Assignment	Conc. PPM w/w
128	72979	diacetyl	0.03
320	47766	butyric acid	0.02
338	36325	hexanal	0.01
433	27923	pentanoic acid	0.01
521	62554	alpha-pinene	0.02
537	66939	sabinene	0.02
557	695994	hexanoic acid + benzaldehyde	0.24
565	48638	6-methyl-5-hepten-2-one	0.02
571	205613	myrcene	0.07
577	69669	beta-pinene	0.02
587	40228	octanal	0.01
602	59100	phellandrene	0.02
607	151444	alpha-terpinene	0.05
613	76140	2-carene	0.03
622	76381	p-cymene	0.03
630	12774499	limonene	4.45
638	14147018	benzyl alcohol	4.92
656	190521	2-hydroxybenzaldehyde + gamma-terpinene	0.07
678	59982	phenylmethyl formate	0.02
688	181675	terpinolene	0.06
693	2055563	linalool	0.72
721	4714233	maltol	1.64
734	181833	2-cyclohexen-1-ol, 1-methyl-4-(1-methylethyl)	0.06
744	31638	limonene oxide	0.01
756	561724	octanoic acid	0.20
761	201075	benzyl acetate	0.07
771	187033	benzene propanal	0.07
777	192043	benzoic acid	0.07
793	1573466	4-terpineol	0.55
805	2108650	alpha-terpineol	0.73
810	2872727	naphthalene-d8 (internal standard)	1.00
835	162090	linalyl acetate	0.06
843	215384	nerol	0.07
849	200704	2-methoxybenzaldehyde	0.07
853	92107	carvone	0.03
863	192007	nonanoic acid	0.07
909	159703856	cinnamic aldehyde	55.59
939	910471	delta-elemene + alpha-terpineol acetate	0.32
975	184660143	eugenol	64.28
988	6738967	eugenyl methyl ether	2.35
992	521400	elemene	0.18
1015	30865726	vanillin	10.74
1027	119802	? sesquiterpene	0.04
1037	25387074	caryophyllene	8.84
1064	9588671	dihydrocoumarin	3.34
1068	1357977	curcumene	0.47
1086	12538585	eugenyl acetate	4.36
1092	1193079	eremophyllene	0.42
1095	1178417	cadinene	0.41
1101	3293682	delta-cadinene	1.15
1110	1905777	2-methoxycinnamic aldehyde	0.66
1174	920785	caryophyllene oxide	0.32
1117-1306	4674870	complex mixture of sesquiterpenes, sesquiterpene alcohols & sesquiterpene oxides	1.63
1311	63761	benzyl benzoate	0.02
1388	281463	caffeine	0.10
Total			169.76

82. The relative amounts of the detected compounds are indicated in columns two (Area Integration) and four (concentration parts per million or “Conc. PPM w/w.”).

83. The most concentrated compounds, corresponding to the highest peaks were from eugenol (MS Scan # 975, 64.8 PPM) and cinnamic aldehyde (MS Scan # 909, 55.59 PPM).

84. Eugenol and cinnamic aldehyde are most commonly obtained from cinnamon.

85. The presence of eugenol and cinnamic aldehyde in large amounts was expected given the picture of cinnamon cloves and reference to “chai spices” on the front label.

86. With respect to the above-identified four vanilla marker compounds, the Product only contains vanillin (MS Scan # 1015) at 10.74 PPM, the third-highest concentration among the flavor compounds detected.

87. Because vanillin has the same chemical profile whether obtained from vanilla beans or produced synthetically, the absence of p-hydroxybenzaldehyde, p-hydroxybenzoic acid and vanillic acid is significant.

88. However, most vanillin used in food to simulate vanilla is not obtained from vanilla beans but from artificial processes which convert natural source materials to vanillin.

89. In samples which contain vanilla from the vanilla bean, the relative amounts of the four marker compounds are an indicator of whether the vanilla flavor is derived from real vanilla or merely compounds designed to imitate and simulate vanilla.

90. For instance, the ratio of vanillin to p-hydroxybenzaldehyde is roughly fifteen-to-one (15:1) in a sample of authentic vanilla derived from vanilla beans.

91. Where a product or sample contains relative amounts of these compounds which deviate significantly from this ratio, it is a molecular indicator that what tastes like vanilla to plaintiff and consumers is actually not from vanilla.

92. Given the total absence of the non-vanillin marker compounds and the high level of vanillin, the logical conclusion is that *if* real vanilla is used, it is in trace or *de minimis* amounts not detectable by advanced scientific means.

93. Non-vanilla vanillin is typically added to flavors containing a drop of real vanilla to “fortify” or “spike” a vanilla taste.

94. Though the amount of real vanilla may be non-detectable, it is likely present at some point far enough back in the supply chain so that defendant can make a literally truthful claim – the Product “contains vanilla” or is “made with vanilla.”

95. However, the Product’s front label does not state “contains vanilla” or “made with vanilla,” but rather, designates the characterizing flavor as “Vanilla” beneath “Chai Tea Latte” and above the more specific description, “Vanilla and honey combine with premium black tea and chai spices.”

96. The Product is commonly expected to contain the characterizing food ingredient of vanilla, based on the unqualified use of “vanilla” on the front label.

97. While only defendant’s flavor supplier is in possession of the flavor formula used and can disclose same to plaintiff and the Court, Whether the Product should be labeled pursuant to 21 C.F.R. § 101.22(i)(1)(i), § 101.22(i)(1)(ii) or § 101.22(i)(1)(iii) cannot be precisely known until defendant’s flavor supplier, who is in exclusive possession of the flavor formula, provides a sample to plaintiff in expedited discovery, for laboratory analysis.

98. Though plaintiff does not have the flavor sample used, the GC-MS analysis, the flavoring regulations and defendant’s clear violation of the regulations provide support for the central contention that the Product’s label deceives consumers to expect it contains more vanilla than it actually does.

99. The Product's label violates the flavor declaration requirements because it either contains "an amount of characterizing ingredient insufficient to independently characterize the food, or the food contains no such ingredient." *See* 21 C.F.R. § 101.22(i)(1)(i) (instructing that "the name of the characterizing flavor may be immediately preceded by the word 'natural' and shall be immediately followed by the word 'flavored'").

100. The Product's label does not say "vanilla flavored chai" or "natural vanilla flavored chai," which is misleading to consumers and in violation of 21 C.F.R. § 101.22(i)(1)(i).

101. A plain reading of the flavor regulations coupled with the complete absence of non-vanillin marker compounds would require the Product be designated as "artificially flavored." *See* 21 C.F.R. § 101.22(i)(1)(ii) ("If none of the natural flavor used in the food is derived from the product whose flavor is simulated, the food in which the flavor is used shall be labeled either with the flavor of the product from which the flavor is derived or as 'artificially flavored.'").

102. Assuming the Product contains a drop of real vanilla, the front label of "Vanilla" and "Vanilla and honey combine with premium black tea and chai spices" is still misleading because (1) vanilla is not followed by the term "flavored" and (2) the label fails to disclose the presence of "other natural flavor which simulates, resembles or reinforces the characterizing flavor" of vanilla. *See* 21 C.F.R. § 101.22(i)(1)(iii).

103. Plaintiff's support for the front label to declare the presence of "other natural flavor" is based in part on the detection of maltol (MS Scan # 721), 1.64 PPM.

104. Maltol is a flavor enhancer and synthetic flavoring substance which does not "contribute a flavor of its own" but is used to enhance and substitute for real vanilla, by increasing

the sweetness of a food or beverage.²¹

V. “Made with Natural Ingredients” is Deceptive and Misleading

105. The front label claim “Made with Natural Ingredients” gives plaintiff and consumers the impression that all the ingredients in the Product are natural.

106. This statement is false, deceptive and misleading with respect to the “vanilla” claims because it gives plaintiff and consumers the impression that the vanilla flavor in the Product is from natural vanilla – the vanilla bean.

107. The GC-MS analysis reveals that while the Product may have vanilla taste, this is not from vanilla but from added vanillin, made from sources such as wood pulp, clove oil and coal tar.

108. This statement is false, deceptive and misleading with respect to the non-vanilla representations because no definition of “natural” ever considered by the FDA countenanced that substances like maltol, limonene (MS Scan # 630), 4.45 PPM or linalool (MS Scan # 693), 0.72 PPM, would be encompassed by this term. *See* 80 Fed. Reg. 69905, “Use of the Term “Natural” in the Labeling of Human Food Products; Request for Information and Comments,” Nov. 12, 2015 (stating FDA would maintain its policy “not to restrict the use of the term ‘natural’ except for added color, synthetic substances, and flavors.”).

109. Given the importance of maltol to creating a vanilla flavor in the Product considering it appears to have little to no vanilla, and that maltol is designated a synthetic flavoring substance, no reasonable consumer would expect such an integral component of the Product to be synthetic as maltol is. *See* 21 C.F.R. § 172.515(b) (“Synthetic flavoring substances and adjuvants.”).

110. Further, no reasonable consumer would expect limonene or linalool to be present

²¹ 21 C.F.R. § 172.515(b) (“Synthetic flavoring substances and adjuvants.”); [Maltol](#), UL Prospector, Bryan W. Nash & Sons Ltd.1. Linalool’s concentration at 0.72 PPM exceeds more than half of the compounds detected by the GC-MS analysis, revealing its importance to the overall composition of the Product.

even in trace amounts in a food which promoted itself as being “Made with Natural Ingredients” because these components are known to be associated with negative health effects and used in insecticides.

111. Limonene has been found to cause kidney toxicity and tumors while linalool is allegedly used as an ingredient “in cockroach insecticide.”

112. The concentration of limonene and linalool is not de minimis, as they are present in amounts exceeding half of the compounds detected, revealing their importance to the overall composition of the Product.

VI. Conclusion

113. Defendant’s branding and packaging of the Products are designed to – and does – deceive, mislead, and defraud consumers.

114. Defendant has sold more of the Products and at higher prices per unit than it would have in the absence of this misconduct, resulting in additional profits at the expense of consumers.

115. The amount and proportion of the characterizing component, vanilla, has a material bearing on price or consumer acceptance of the Products because consumers are willing to pay more for such Products.

116. The promotion of natural ingredients deceives consumers.

117. The value of the Product that plaintiff purchased and consumed was materially less than its value as represented by defendant.

118. Had plaintiff and class members known the truth, they would not have bought the Products or would have paid less for it.

119. The Product contains other representations which are misleading and deceptive.

120. As a result of the false and misleading labeling, the Product is sold at a premium

price, approximately no less than \$3.89 per unit, excluding tax, compared to other similar products represented in a non-misleading way.

Jurisdiction and Venue

121. Jurisdiction is proper pursuant to 28 U.S.C. § 1332(d)(2) (Class Action Fairness Act of 2005 or “CAFA”).

122. Under CAFA, district courts have “original federal jurisdiction over class actions involving (1) an aggregate amount in controversy of at least \$5,000,000; and (2) minimal diversity[.]” *Gold v. New York Life Ins. Co.*, 730 F.3d 137, 141 (2d Cir. 2013).

123. Upon information and belief, the aggregate amount in controversy is more than \$5,000,000.00, exclusive of interests and costs.

124. Plaintiff is a citizen of New York.

125. Defendant is a Oregon corporation with a principal place of business in Seattle, King County, Oregon and is a citizen of Oregon.

126. This court has personal jurisdiction over defendant because it conducts and transacts business, contracts to provide and/or supply and provides and/or supplies services and/or goods within New York.

127. Venue is proper because plaintiff and many class members reside in this District and defendant does business in this District and State.

128. A substantial part of events and omissions giving rise to the claims occurred in this District.

Parties

129. Plaintiff is a citizen of New York, Bronx County, New York.²²

130. Defendant Oregon Chai, Inc. is a Oregon corporation with a principal place of business in Seattle, Oregon, King County.

131. During the relevant statutes of limitations, plaintiff purchased the Product within this district and/or State for personal consumption in reliance on the representations.

Class Allegations

132. The classes will consist of all purchasers of the Products in New York, the other 49 states and a nationwide class, during the applicable statutes of limitations.

133. Common questions of law or fact predominate and include whether defendant's representations were and are misleading and if plaintiff and class members are entitled to damages.

134. Plaintiff's claims and basis for relief are typical to other members because all were subjected to the same unfair and deceptive representations and actions.

135. Plaintiff is an adequate representative because his interests do not conflict with other members.

136. No individual inquiry is necessary since the focus is only on defendant's practices and the class is definable and ascertainable.

137. Individual actions would risk inconsistent results, be repetitive and are impractical to justify, as the claims are modest relative to the scope of the harm.

138. Plaintiff's counsel is competent and experienced in complex class action litigation and intends to adequately and fairly protect class members' interests.

139. Plaintiff seeks class-wide injunctive relief because the practices continue.

New York GBL §§ 349 & 350

²² The complaint originally filed misstated plaintiff's citizenship (New York) and residence, in Bronx County.

(Consumer Protection from Deceptive Acts)

140. Plaintiff incorporates by reference all preceding paragraphs.

141. Plaintiff and class members desired to purchase, consume and use products or services which were as described and marketed by defendant and expected by reasonable consumers, given the product or service type.

142. Defendant's acts and omissions are not unique to the parties and have a broader impact on the public.

143. Defendant misrepresented the substantive, quality, compositional, organoleptic and/or nutritional attributes of the Products.

144. Defendant's conduct was misleading, deceptive, unlawful, fraudulent, and unfair because it gives the impression to consumers the Products contain sufficient amounts of the highlighted ingredient, vanilla, to independently characterize the taste or flavor of the Products, did not contain other flavor components which simulate, resemble or reinforce the characterizing flavor and only contained flavor from vanilla.

145. Plaintiff and class members would not have purchased the Products or paid as much if the true facts had been known, suffering damages.

Negligent Misrepresentation

146. Plaintiff incorporates by reference all preceding paragraphs.

147. Defendant misrepresented the substantive, quality, compositional, organoleptic and/or nutritional attributes of the Products.

148. Defendant's conduct was misleading, deceptive, unlawful, fraudulent, and unfair because it gives the impression to consumers the Products contain sufficient amounts of the highlighted ingredient, vanilla, to independently characterize the taste or flavor of the Products,

did not contain other flavor components which simulate, resemble or reinforce the characterizing flavor and only contained flavor from vanilla.

149. Defendant had a duty to disclose and/or provide non-deceptive marketing of the Products and knew or should have known same were false or misleading.

150. This duty is based on defendant's position as an entity which has held itself out as having special knowledge and experience in the production, service and/or sale of the product or service type.

151. The representations took advantage of consumers' (1) cognitive shortcuts made at the point-of-sale and (2) trust placed in defendant, a well-known and respected brand in this sector.

152. Plaintiff and class members reasonably and justifiably relied on these negligent misrepresentations and omissions, which served to induce and did induce, the purchase of the Products.

153. Plaintiff and class members would not have purchased the Product or paid as much if the true facts had been known, suffering damages.

Breaches of Express Warranty, Implied Warranty of Merchantability and
Magnuson Moss Warranty Act, 15 U.S.C. §§ 2301, *et seq.*

154. Plaintiff incorporates by reference all preceding paragraphs.

155. The Products were manufactured, labeled and sold by defendant and warranted to plaintiff and class members that they possessed substantive, functional, nutritional, qualitative, compositional, organoleptic, sensory, physical and other attributes which they did not.

156. Defendant had a duty to disclose and/or provide non-deceptive descriptions and marketing of the Products.

157. This duty is based, in part, on defendant's position as one of the most recognized companies in the nation in this sector.

158. Plaintiff provided or will provide notice to defendant, its agents, representatives, retailers and their employees.

159. Defendant received notice and should have been aware of these misrepresentations due to numerous complaints by consumers to its main office over the past several years.

160. The Products did not conform to their affirmations of fact and promises due to defendant's actions and were not merchantable.

161. Plaintiff and class members would not have purchased the Products or paid as much if the true facts had been known, suffering damages.

Fraud

162. Plaintiff incorporates by references all preceding paragraphs.

163. Defendant's conduct was misleading, deceptive, unlawful, fraudulent, and unfair because it gives the impression to consumers the Products contain sufficient amounts of the highlighted ingredient, vanilla, to independently characterize the taste or flavor of the Products, did not contain other flavor components which simulate, resemble or reinforce the characterizing flavor and only contained flavor from vanilla.

164. Defendant's fraudulent intent is evinced by its failure to accurately identify the Products on the front label when it knew this was not true.

165. Plaintiff and class members would not have purchased the Products or paid as much if the true facts had been known, suffering damages.

Unjust Enrichment

166. Plaintiff incorporates by reference all preceding paragraphs.

167. Defendant obtained benefits and monies because the Products were not as represented and expected, to the detriment and impoverishment of plaintiff and class members,

who seek restitution and disgorgement of inequitably obtained profits.

Jury Demand and Prayer for Relief

Plaintiff demands a jury trial on all issues.

WHEREFORE, Plaintiff prays for judgment:

1. Declaring this a proper class action, certifying Plaintiff as representative and undersigned as counsel for the class;
2. Entering preliminary and permanent injunctive relief by directing defendant to correct the challenged practices to comply with the law;
3. Injunctive relief to remove, correct and/or refrain from the challenged practices and representations, restitution and disgorgement for members of the State Subclasses pursuant to the applicable laws of their States;
4. Awarding monetary damages and interest, including treble and punitive damages, pursuant to the common law and other statutory claims;
5. Awarding costs and expenses, including reasonable fees for plaintiff's attorneys and experts; and
6. Other and further relief as the Court deems just and proper.

Dated: February 18, 2020

Respectfully submitted,

Sheehan & Associates, P.C.

/s/Spencer Sheehan

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1:19-cv-10686-KPF
United States District Court
Southern District of New York

Ryan Cosgrove, individually and on behalf of all others similarly situated,

Plaintiff,

- against -

Oregon Chai, Inc.,

Defendant

Class Action Complaint

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Pursuant to 22 NYCRR 130-1.1, the undersigned, an attorney admitted to practice in the courts of New York State, certifies that, upon information, and belief, formed after an inquiry reasonable under the circumstances, the contentions contained in the annexed documents are not frivolous.

Dated: February 18, 2020

/s/ Spencer Sheehan
Spencer Sheehan